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| 10/527,712 | 08/17/2005 | Kuniko Kimura | 12480-000108/US | 9156 |
| 30593 7590 11/20/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195 | | | | |
| EXAMINER | | | | |
| ULLAH, ELIAS | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,712

Applicant(s)

KIMURA ET AL.

Examiner

ELIAS ULLAH

Art Unit

2892

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-12 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) 22-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-12 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to an amendment filed on 7/14/2009.

Election/Restrictions

1. This application contains claims 22-31 drawn to an invention nonelected with traverse in the reply filed on 11/21/2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 7-10, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misewich et al. (Misewich, US 2002/0118369 A1) in view of Bhushan (US 6,404,207).

With regard to claims 1-2, 19-21, Misewich teaches a method for manufacturing a thin film 12 (Fig. 1), comprising the step of applying a force (Fig. 1 wherein force been applied by field [0018]), with a part having a sharp tip 13 (Fig. 1, [0017]), onto an entire area or arbitrary region of a film 12 (Fig. 1) during or after formation of the film 12 and apply mechanical force is applied in a scanning direction [0018 wherein force is applied to AFM tip by voltage that is same applicant disclosed in space page 7 "electric filed and a magnetic force generated by application of a magnetic field")

Misewich further teaches a surface of the film 12 is scanned [0022], but fail to teach the film 12 is scanned by contacting the part having a sharp tip 13 (Fig. 1, e.g. Misewich Atomic force microscope tip 13 not contacting the thin film 12).

However, Bhushan teaches an atomic force microscope probe 104 (Fig. 1, col. 3, lines 5-7) comprises an AFM tip 126 (Fig. 1) contacting an insulating layer 128 (Fig. 1, col.3, lines 14-20). At the time the invention was made, it would have been obvious to a

person having ordinary skill in the art to use AFM tip for scanning thin film by constant contact with sample e.g. insulating layer 128 teaching of Bhushan in the method for manufacturing a thin film comprising the step of applying a force of Misewich, because such sharp tip in contact with a thin film during the scanning is a conventional process as taught by Bhushan in (Fig. 1, e.g. prior art and col. 3, lines 1-25).

With the recitation of "so as to control a structure of the film, wherein the structure of the film is controlled by controlling (i) a crystalline structure of crystals constituting the film, (ii) an orientation direction of crystals constituting the film, (iii) an orientation direction of molecules in the crystals, or (iv) any combination of (i) through, so that the crystals and/or molecules are oriented in the scanning direction" is only a statement of the inherent properties of the product. The product e.g. AFM in recited in Misewich is substantially identical to that of the claims AFM, claimed properties or functions are presumed to be inherent. Or where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and MPEP 2112.01.

With regard to claims 3-4, Misewich teaches the force applied (see Fig. 1, wherein probe 2 (Fig. 2) is disposed on film 12) on the film 12 derives from only the part having a sharp tip 2 [0018].

With regard to claims 7 and 8, Misewich teaches the thin 12 film is formed on a substrate 11.

With regard to claims 9 and 10, Misewich teaches the part having a sharp tip is an atomic force microscope [0018].

With regard to claims 17-18, Misewich teaches the thin film 12 is made of made of an organic polymer [0018].

4. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misewich et al. (Misewich, US 2002/0118369 A1) of record in view of Bhushan (US 6,404,207) as applied to the above claims 1 and 2 and further in view of Dietzel et al. (Dietzel, US 6,665,258) of record.

With regard to claims 11-12, Misewich teaches plural areas (domains see Fig. 1), but fails to teach plural areas of the film are simultaneously processed with plural parts having sharp tips.

Dietzel teaches plural areas of the film are simultaneously processed with plural parts having sharp tips (col. 5, lines 46-60). At the time the invention was made, it would have been obvious to a person having ordinary skill in the art to use "plural areas of the film are simultaneously processed with plural parts having sharp tips" teaching of Dietzel in the method for manufacturing a thin film of Misewich, because plural parts having sharp tips are able to measure multiple area of a storage medium as taught by Dietzel in (col. 5, lines 46-50).

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 7-12, 17-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIAS ULLAH whose telephone number is (571)272-1415. The examiner can normally be reached on weekdays, between 8AM-5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao Le can be reached on (571) 272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/Elias Ullah/
Examiner, Art Unit 2892

/Thao X Le/
Supervisory Patent
Examiner, Art Unit 2892